Gypsum GIS Layer

This GIS layer displays mapped geologic units having gypsum resource potential in Utah. Gypsum is used for many purposes including several construction and agricultural applications. Required purity of a gypsum deposit depends on the end use, but deposits often contain 10% or more of impurities. Utah hosts several gypsum-bearing geologic units, including some that are quite pure. Where possible, we used the most recent GIS data from 1:100,000-scale geologic mapping to build this layer. Where detailed mapping was unavailable, we used the 1:500,000-scale geologic map of Utah. Typically, only specific zones within a geologic formation contain gypsum, so the entire mapped exposure of a unit does not imply that it is entirely gypsum. Each polygon within the gypsum layer has the following associated attributes: geologic unit name, unit age, resource potential ranking, and geologic map reference. Gypsum is typically mined at depths of less than 600 feet, so we did not include subsurface gypsum resources, such as those of the Paradox Basin.

All of the geologic units in the layer are assumed to have some resource potential for gypsum based on available data. Our rankings for resource areas are primarily based on production data and gypsum bed thickness data. We assigned a "**high**" resource potential ranking to geologic units in areas where that unit has been a source of substantial gypsum production. A "**moderate**" resource potential was given to units in areas where limited production has occurred or multiple data points suggest substantial gypsum beds (typically greater than 10 feet thick). An "**undetermined**" resource potential ranking was assigned to units that are known to have gypsum beds, but additional, detailed data are limited.

This is not an exhaustive dataset. Other geologic units in Utah may have resource potential for gypsum but were not selected for this layer due to lack of substantial data.

NOTE: Our determinations of gypsum resource potential DO NOT imply a determination of locatability for claim-staking purposes.

Data used to evaluate gypsum for this layer came from published and unpublished sources.

Useful references:

Rupke, A.L., and Boden, T., 2013, Gypsum resources of the San Rafael Swell, *in* Morris, T.H., and Ressetar, R., editors, The San Rafael Swell and Henry Mountains basin—geologic centerpiece of Utah: Utah Geological Association Publication 42, p. 445-460.

Willis, G.C., 2006, Salt and gypsum of the Arapien Shale—the central Utah evaporite mineral industry, Utah, *in* Harty, K.M., and Tabet, D.E., editors, Geology of northwest Utah: Utah Geological Association Publication 34, p. 604-643.

Withington, C.F., 1964, Gypsum and anhydrite, *in* Hilpert, L.S., editor, Mineral and water resources of Utah: Utah Geological and Mineralogical Survey Bulletin 73, p. 177-185.